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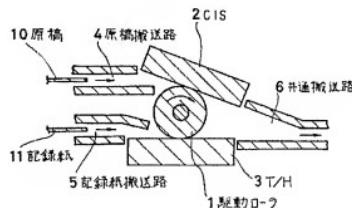
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(54)【考案の名称】 CIS-T/H拂造

## (57)【要約】

【目的】 密着イメージセンサ(CIS)と、サーマルヘッド(T/H)の共用化を図り、装置の構成の簡略化を可能にしたCIS-T/H拂造を得る。

【構成】 正転、逆転可能な駆動ローラ1と、駆動ローラ1の一側に設けたCIS2と、他側に設けたT/H3と、CIS2に原稿10を案内する原稿搬送路4と、T/H3に記録紙11を案内する記録紙搬送路5と、CIS2及びT/H3からの原稿及び記録紙を搬送する共通搬送路6を備える。駆動ローラ1が正転するときに原稿搬送路4からの原稿10はCIS2により原稿読み取りが行われ、駆動ローラ1が逆転するときに記録紙搬送路5からの記録紙11はT/H3により記録が行われ、原稿及び記録紙はそれぞれ共通搬送路6から搬出される。



## 【実用新案登録請求の範囲】

【請求項1】 正転、逆転可能な駆動ローラと、この駆動ローラの一側において前記駆動ローラに押圧される密着イメージセンサ（C I S）と、前記駆動ローラの他側において前記駆動ローラに押圧されるサーマルヘッド（T/H）と、前記駆動ローラとC I Sとの間に原稿を案内する原稿搬送路と、前記駆動ローラとT/Hとの間に記録紙を案内する記録紙搬送路と、これら搬送路の反対側にあって前記C I Sからの原稿とT/Hからの記録紙を搬送する共通搬送路を備えることを特徴とするC I S 10-T/H構造。

【請求項2】 駆動ローラは、原稿が搬送されるときに正転し、記録紙が搬送されるときに逆転するように構成\*

\* してなる請求項1のC I S-T/H構造。

## 【図面の簡単な説明】

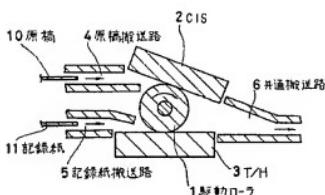
【図1】本考案のC I S-T/H構造の断面図である。

【図2】従来のC I S-T/H構造の断面図である。

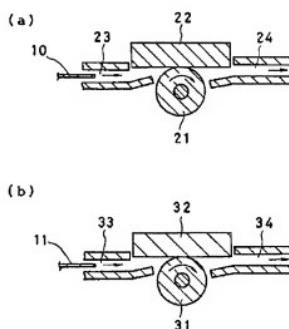
## 【符号の説明】

- 1 駆動ローラ
- 2 C I S
- 3 T/H
- 4 原稿搬送路
- 5 記録紙搬送路
- 6 共通搬送路
- 10 原稿
- 11 記録紙

【図1】



【図2】



**【考案の詳細な説明】****【0001】****【産業上の利用分野】**

本考案はファクシミリ等のようにCIS部とT/H部を有する装置に関し、特にCIS部及びT/H部の共用化を図って構造の簡略化を図ったCIS-T/H構造に関する。

**【0002】****【従来の技術】**

従来のファクシミリ装置のようにCIS部とT/H部を有する装置では、CIS部とT/H部とがそれぞれ独立した構成とされている。例えば、CIS部は図2(a)に示すように、装置内的一部に軸転可能なCIS用ローラ21を設け、このCIS用ローラ21の周面に対して直角にCIS22を押圧させる。そして、原稿10をCIS22へ運ぶ搬送路23と原稿をCIS22から運ぶ搬送路24を設けている。又、T/H部は図2(b)に示すように、装置内の他の部位に軸転可能なT/H用ローラ31を設け、このT/H用ローラ31の周面に対して直角にT/H32を押圧させる。そして、記録紙11をT/H部へ運ぶ搬送路33と記録紙をT/H32から運ぶ搬送路34を設けている。

**【0003】****【考案が解決しようとする課題】**

この従来のCIS-T/H構造は、CIS部及びT/H部がそれぞれ独立に構成されているため、装置内の異なる箇所のそれぞれにCIS用ローラ21及びT/H用ローラ31が配設され、かつ各々に原稿を運ぶ搬送路23、24及び記録紙を運ぶ搬送路33、34が配設されていた。したがって、CIS用ローラ21とT/H用ローラ31を含む構成部品が多くなり、部品構成スペースが大きくなったり、部品費が高くなるというような問題点があった。

本考案の目的は、CIS部とT/H部の共用化を図り、装置の構成の簡略化を可能にしたCIS-T/H構造を提供することにある。

**【0004】****【課題を解決するための手段】**

本考案は、正転、逆転可能な駆動ローラと、この駆動ローラの一側において駆動ローラに押圧されるCISと、駆動ローラの他側において駆動ローラに押圧されるT/Hと、駆動ローラとCISとの間に原稿を案内する原稿搬送路と、駆動ローラとT/Hとの間に記録紙を案内する記録紙搬送路と、これら搬送路の反対側にあってCISからの原稿とT/Hからの記録紙を搬送する共通搬送路を備える。

例えば、駆動ローラは、原稿が搬送されるときに正転し、記録紙が搬送されるときに逆転するように構成する。

#### 【0005】

##### 【作用】

駆動ローラが正転するときに原稿搬送路からの原稿はCISにより駆動ローラに押圧された状態で原稿読み取りが行われ、共通搬送路から搬出される。又、駆動ローラが逆転するときに記録紙搬送路からの記録紙はT/Hにより駆動ローラに押圧された状態で記録が行われ、共通搬送路から搬出される。

#### 【0006】

##### 【実施例】

次に、本考案について図面を参照して説明する。図1は本考案の一実施例のCIS-T/H構造の断面図である。同図において、1は駆動ローラであり、図示の矢印方向に正転し、かつこれと逆方向に逆転させることができる。この駆動ローラ1の一側にはCIS2が周面と直角方向に押圧されている。又、駆動ローラ1の他側にはT/H3が周面と直角方向に押圧されている。そして、前記CIS2には、図示しない原稿搬送機構により搬送されてくる原稿10を前記CIS2と駆動ローラ1との間に搬送する原稿搬送路4を設けている。同様に、前記T/H3には、図示しない記録紙搬送機構により搬送されてくる記録紙11を前記T/H3と駆動ローラ1との間に搬送する記録紙搬送路5を設けている。

更に、前記原稿搬送路4と記録紙搬送路5の反対側には、前記原稿10と記録紙11を搬出させるための共通搬送路6を設けている。

#### 【0007】

この構成によれば、原稿搬送路4から原稿10が搬送されて来るときには、駆

動ローラ1は図示矢印方向に回転されており、CIS2の押圧力によって原稿10は駆動ローラ1とCIS2との間に挟まれ、原稿10を駆動ローラ1によって図示右方向へ移動させ、同時に原稿10の内容を光学的に読み取ることができる。読み取られた原稿10は共通搬送路6により搬出される。

又、記録紙搬送路5から記録紙11が搬送されて来るときには、駆動ローラ1は矢印の反対方向に回転されており、T/H3の押圧力によって記録紙11は駆動ローラ1とT/H3の間に挟まれ、記録紙11を駆動ローラ1によって図示右方向へ移動させ、同時に記録紙11に印字等の所要の記録を実行する。記録された記録紙11は共通搬送路6により搬出される。

したがって、この構成では1つの駆動ローラ1を用いて原稿の読み取りと記録紙への記憶を行うことができ、しかも原稿と記録紙を共通搬送路6を利用して搬出させることができるので、従来構造に比較して構成を簡略化することができる。これにより、駆動ローラの駆動機構をも簡略化することができる。

#### 【0008】

##### 【考案の効果】

以上説明したように本考案は、CIS-T/H構造のCIS用ローラとT/H用ローラを一本の駆動ローラで共有し、かつ原稿及び記録紙を搬出するための搬送路をも一つの共有搬送路として構成しているので、構成部品が少なくなり、装置の小型化や部品費の低減が可能となるという効果を有する。

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**CLAIMS**

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**[Utility model registration claim]**

[Claim 1] The driving roller which can be rotated normally and reversed, and the contact image sensor pressed by said driving roller at the 1 side of this driving roller (CIS), The thermal head pressed by said driving roller at a side besides said driving roller (T/H), The manuscript conveyance way which guides a manuscript between said driving rollers and CIS, and said driving roller and the recording paper conveyance way which guides the recording paper between T/H, CIS-T/H structure characterized by having the common conveyance way which is located in the opposite hand of these conveyances way, and conveys the recording paper from the manuscript and T/H from said CIS.

[Claim 2] A driving roller is CIS-T/H structure of claim 1 which constitutes and becomes so that it may reverse, when it rotates normally when a manuscript is conveyed, and the recording paper is conveyed.

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**DETAILED DESCRIPTION**

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[Detailed explanation of a design]

[0001]

[Industrial Application]

This design is related with the CIS-T/H structure in which especially drawing attained simplification of structure in common use-ization of the CIS section and the T/H section about the equipment which has the CIS section and the T/H section like facsimile.

[0002]

[Description of the Prior Art]

With the equipment which has the CIS section and the T/H section like the conventional facsimile apparatus, the CIS section and the T/H section are considered as the configuration which became independent, respectively. For example, the CIS section forms the roller 21 for CIS in which \*\*\*\* is possible in the part in equipment, and makes a right angle press CIS22 to the peripheral surface of this roller 21 for CIS, as shown in drawing 2 (a). And the conveyance way 23 which carries a manuscript 10 to CIS22, and the conveyance way 24 which carries a manuscript from CIS22 are formed. Moreover, the T/H section forms the roller 31 for T/H in which \*\*\*\* is possible in other parts in equipment, and makes a right angle press T/H32 to the peripheral surface of this roller 31 for T/H, as shown in drawing 2 (b). And the conveyance way 33 which carries the recording paper 11 to the T/H section, and the conveyance way 34 which carries the recording paper from T/H32 are formed.

[0003]

[Problem(s) to be Solved by the Device]

the conveyance ways 33 and 34 which carry the conveyance ways 23 and 24 and the recording paper with which a different part in equipment is alike, respectively, the roller 21 for CIS and the roller 31 for T/H are arranged since the CIS section and the T/H section are constituted independently, respectively, and this conventional CIS - T/H structure carries a manuscript to each were arranged. Therefore, the component parts containing the roller 21 for CIS and the roller 31 for T/H increased in number, and there was a trouble that a bill-of-materials tooth space became large, or components expense became high.

The object of this design attains common use-ization of the CIS section and the T/H section, and is to offer the CIS-T/H structure which enabled simplification of the configuration of equipment.

[0004]

[Means for Solving the Problem]

This design is equipped with the manuscript conveyance way which guides a manuscript between the driving roller which can be rotated normally and reversed, CIS pressed by the driving roller at the 1 side of this driving roller, T/H pressed by the driving roller at a side besides a driving roller, and a driving roller and CIS, a driving roller and the recording paper conveyance way which guides the recording paper between T/H, and the common conveyance way which is located in the opposite hand of these conveyances way, and conveys the recording paper from the manuscript and T/H from CIS.

For example, a driving roller rotates normally, when a manuscript is conveyed, and it is constituted so

that it may reverse, when the recording paper is conveyed.

[0005]

[Function]

When a driving roller rotates normally, manuscript reading is performed and the manuscript from a manuscript conveyance way is taken out from a common conveyance way, after having been pressed by the driving roller by CIS. Moreover, when a driving roller is reversed, record is performed and the recording paper from a recording paper conveyance way is taken out from a common conveyance way, after having been pressed by the driving roller by T/H.

[0006]

[Example]

Next, this design is explained with reference to a drawing. Drawing 1 is the sectional view of the CIS-T/H structure of one example of this design. 1 is a driving roller, and can be rotated normally in the direction of an arrow head of a graphic display, and this and hard flow can be made to reverse it in this drawing. CIS2 is pressed in the peripheral surface and the direction of a right angle at the 1 side of this driving roller 1. Moreover, T/H3 is pressed in the peripheral surface and the direction of a right angle at the side besides a driving roller 1. And the manuscript conveyance way 4 which conveys the manuscript 10 conveyed according to the manuscript conveyance device which is not illustrated between said CIS2 and driving rollers 1 is established in said CIS2. Similarly, the recording paper conveyance way 5 which conveys the recording paper 11 conveyed according to the recording paper conveyance device which is not illustrated between said T/H3 and driving rollers 1 is established in said T/H3.

Furthermore, the common conveyance way 6 for making said manuscript 10 and recording paper 11 take out is established in the opposite hand of said manuscript conveyance way 4 and the recording paper conveyance way 5.

[0007]

According to this configuration, when a manuscript 10 is conveyed from the manuscript conveyance way 4, the driving roller 1 is rotating in the direction of a graphic display arrow head, by the thrust of CIS2, a manuscript 10 can be inserted between a driving roller 1 and CIS2, and can move a manuscript 10 rightward [graphic display] with a driving roller 1, and can read the content of the manuscript 10 optically simultaneously. The read manuscript 10 is taken out by the common conveyance way 6.

Moreover, when the recording paper 11 is conveyed from the recording paper conveyance way 5, the driving roller 1 is rotating to the opposite direction of an arrow head, by the thrust of T/H3, the recording paper 11 is inserted between a driving roller 1 and T/H3, and moves the recording paper 11 rightward [graphic display] with a driving roller 1, and performs necessary record of printing etc. on the recording paper 11 simultaneously. The recorded recording paper 11 is taken out by the common conveyance way 6.

Therefore, since reading of a manuscript and the storage to the recording paper can be performed using one driving roller 1 with this configuration and a manuscript and the recording paper can moreover be made to take out using the common conveyance way 6, as compared with structure, a configuration can be simplified conventionally. Thereby, the drive of a driving roller can also be simplified.

[0008]

[Effect of the Device]

Since the conveyance way for this design sharing the roller for CIS and the roller for T/H of CIS-T/H structure between one driving roller, and taking out a manuscript and the recording paper, as explained above is also constituted as one share conveyance way, a component part decreases, and it has the effectiveness that the miniaturization of equipment and reduction of components expense are attained.

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**TECHNICAL FIELD**

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**[Industrial Application]**

This design is related with the CIS-T/H structure which attained common use-ization of the CIS section and the T/H section, and attained simplification of structure especially about the equipment which has the CIS section and the T/H section like facsimile.

[0002]

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**PRIOR ART**

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**[Description of the Prior Art]**

With the equipment which has the CIS section and the T/H section like the conventional facsimile apparatus, the CIS section and the T/H section are considered as the configuration which became independent, respectively. For example, the CIS section forms the roller 21 for CIS in which \*\*\*\* is possible in the part in equipment, and makes a right angle press CIS22 to the peripheral surface of this roller 21 for CIS, as shown in drawing 2 (a). And the conveyance way 23 which carries a manuscript 10 to CIS22, and the conveyance way 24 which carries a manuscript from CIS22 are formed. Moreover, the T/H section forms the roller 31 for T/H in which \*\*\*\* is possible in other parts in equipment, and makes a right angle press T/H32 to the peripheral surface of this roller 31 for T/H, as shown in drawing 2 (b). And the conveyance way 33 which carries the recording paper 11 to the T/H section, and the conveyance way 34 which carries the recording paper from T/H32 are formed.

[0003]

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**EFFECT OF THE INVENTION**

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**[Effect of the Device]**

Since the conveyance way for this design sharing the roller for CIS and the roller for T/H of CIS-T/H structure between one driving roller, and taking out a manuscript and the recording paper, as explained above is also constituted as one share conveyance way, a component part decreases, and it has the effectiveness that the miniaturization of equipment and reduction of components expense are attained.

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**TECHNICAL PROBLEM**

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**[Problem(s) to be Solved by the Device]**

the conveyance ways 33 and 34 which carry the conveyance ways 23 and 24 and the recording paper with which a different part in equipment is alike, respectively, the roller 21 for CIS and the roller 31 for T/H are arranged since the CIS section and the T/H section are constituted independently, respectively, and this conventional CIS - T/H structure carries a manuscript to each were arranged. Therefore, the component parts containing the roller 21 for CIS and the roller 31 for T/H increased in number, and there was a trouble that a bill-of-materials tooth space became large, or components expense became high.

The purpose of this design attains common use-ization of the CIS section and the T/H section, and is to offer the CIS-T/H structure which enabled simplification of the configuration of equipment.

[0004]

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**MEANS**

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**[Means for Solving the Problem]**

This design is equipped with the manuscript conveyance way which guides a manuscript between the driving roller which can be rotated normally and reversed, CIS pressed by the driving roller at the 1 side of this driving roller, T/H pressed by the driving roller at a side besides a driving roller, and a driving roller and CIS, a driving roller and the recording paper conveyance way which guides the recording paper between T/H, and the common conveyance way which is located in the opposite side of these conveyances way, and conveys the recording paper from the manuscript and T/H from CIS.  
For example, a driving roller rotates normally, when a manuscript is conveyed, and it is constituted so that it may reverse, when the recording paper is conveyed.  
[0005]

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**OPERATION**

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**[Function]**

When a driving roller rotates normally, manuscript reading is performed and the manuscript from a manuscript conveyance way is taken out from a common conveyance way, after having been pressed by the driving roller by CIS. Moreover, when a driving roller is reversed, record is performed and the recording paper from a recording paper conveyance way is taken out from a common conveyance way, after having been pressed by the driving roller by T/H.

[0006]

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---

**EXAMPLE**

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**[Example]**

Next, this design is explained with reference to a drawing. Drawing 1 is the sectional view of the CIS-T/H structure of one example of this design. 1 is a driving roller, and can be rotated normally in the direction of an arrow head of illustration, and this hard flow can be made to reverse it in this drawing. CIS2 is pressed in the peripheral surface and the direction of a right angle at the 1 side of this driving roller 1. Moreover, T/H3 is pressed in the peripheral surface and the direction of a right angle at the side besides a driving roller 1. And the manuscript conveyance way 4 which conveys the manuscript 10 conveyed according to the manuscript conveyance device which is not illustrated between said CIS2 and driving rollers 1 is established in said CIS2. Similarly, the recording paper conveyance way 5 which conveys the recording paper 11 conveyed according to the recording paper conveyance device which is not illustrated between said T/H3 and driving rollers 1 is established in said T/H3.

Furthermore, the common conveyance way 6 for making said manuscript 10 and recording paper 11 take out is established in the opposite side of said manuscript conveyance way 4 and the recording paper conveyance way 5.

[0007]

According to this configuration, when a manuscript 10 is conveyed from the manuscript conveyance way 4, the driving roller 1 is rotating in the direction of an illustration arrow head, by the thrust of CIS2, a manuscript 10 can be inserted between a driving roller 1 and CIS2, and can move a manuscript 10 rightward [ illustration ] with a driving roller 1, and can read the contents of the manuscript 10 optically to coincidence. The read manuscript 10 is taken out by the common conveyance way 6.

Moreover, when the recording paper 11 is conveyed from the recording paper conveyance way 5, the driving roller 1 is rotating to the opposite direction of an arrow head, by the thrust of T/H3, the recording paper 11 is inserted between a driving roller 1 and T/H3, and moves the recording paper 11 rightward [ illustration ] with a driving roller 1, and performs necessary record of printing etc. on the recording paper 11 at coincidence. The recorded recording paper 11 is taken out by the common conveyance way 6.

Therefore, since reading of a manuscript and the storage to the recording paper can be performed using one driving roller 1 with this configuration and a manuscript and the recording paper can moreover be made to take out using the common conveyance way 6, as compared with structure, a configuration can be simplified conventionally. Thereby, the drive of a driving roller can also be simplified.

[0008]

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[Translation done.]

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- 2.\*\*\*\* shows the word which can not be translated.
- 3.In the drawings, any words are not translated.

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**DESCRIPTION OF DRAWINGS**

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[Brief Description of the Drawings]

[Drawing 1] It is the sectional view of the CIS-T/H structure of this design.

[Drawing 2] It is the sectional view of the conventional CIS-T/H structure.

[Description of Notations]

1 Driving Roller

2 CIS

3 T/H

4 Manuscript Conveyance Way

5 Recording Paper Conveyance Way

6 Common Conveyance Way

10 Manuscript

11 Recording Paper

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[Translation done.]

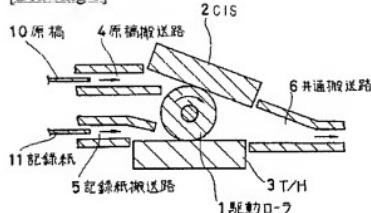
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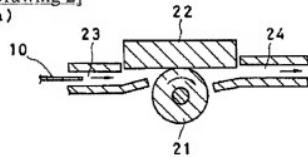
## DRAWINGS

[Drawing 1]

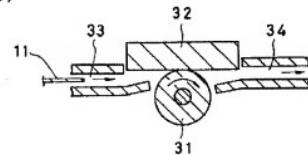


[Drawing 2]

(a)



(b)



[Translation done.]